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| | | | 2616 | |

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,069

Applicant(s)

GUPTA ET AL.

Examiner

Cynthia L. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/9/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-135 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 61-93 and 135 is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-19, 22, 54-60 and 94-134 is/are rejected.
- 7) ☒ Claim(s) 16, 20, 21 and 23-53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/8/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-15, 17-19, 22, 54-60, and 134 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments, with respect to claims 16, 20-21, 23-53, 61-93 and 135 have been fully considered and are persuasive. The rejections of claims has been withdrawn.
3. Applicant's arguments regarding claims 94-133 have been fully considered but they are not persuasive. In the arguments, applicant says that claim 94 is dependent on allowable claim 61, however, the version of claim 94 in the listing of the claims is written in independent form.

Regarding claim 105, the connection that does the writing may be explicitly closed by a command; this would gracefully close the write connection.

Regarding claim 115, applicant's arguments that the offloading in applicant's invention are of a stateful nature is not reflected in the language of the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

94-100 are

4. Claim ~~54-60~~⁹⁴⁻¹⁰⁰ is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 94 is directed to an API, which is an abstract idea with no physical embodiment.

Claim Objections

5. Claim 1 is objected to as being indefinite. Stating that the TCP handler is "capable of" interfacing with said ULP handler and that the ULP handler is "adapted to" take over and perform at least one session layer function of a host computer connected to a network are not positive claim limitations; see MPEP 2106(II)(C). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 54 is rejected under 35 U.S.C. 102(e) as being anticipated by Craft (6427171).

Regarding claim 54, transferring a connection context to a network interface card; and taking over from a host computer attached to the network and have the network interface card perform network functions that include at least the full transport connection context is disclosed in Craft, column 2, lines 66-column 3, line 20 (the connection context is stored as a CCB in the INIC; the INIC performs fast-path processing functions).

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7. Claims 1-8, 10-12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Boom.

Regarding claim 1, an upper layer protocol (ULP) handler, a TCP handler capable of interfacing with said ULP handler; a link handler, and the ULP handler of the network interface card is adapted to take over and perform at least one session layer function of a host computer connected to a network are disclosed in Boom, paragraphs 47-49 (disclosing session-layer offloaded processing being handled by a NIC).

Regarding claim 2, the network interface card is a layer 5 network interface card in a network implementing an open systems interconnection (OSI) protocol is disclosed in Boom paragraph 48-49 (disclosing the NIC performing off-loaded session, or layer 5, processing).

Regarding claim 3, data from the network is received and processed by the network interface card is disclosed in Boom, paragraph 49 (disclosing processing the packets; any data anywhere in the packet is data from the network).

Regarding claim 4, said processing comprises taking over and performing at least one function of a physical layer from the host computer is disclosed in Boom, paragraph 36.

Regarding claim 5, said processing comprises taking over and performing at least one function of a data link layer from the host computer is disclosed in Boom, paragraph 36.

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Regarding claim 6, said processing comprises taking over and performing at least one function of a network layer from the host computer is disclosed in Boom, paragraph 36.

Regarding claim 7, said processing comprises taking over and performing at least one function of a transport layer from the host computer is disclosed in Boom, paragraph 36 (TCP/IP is a transport layer function).

Regarding claim 8, said ULP handler is adapted to communicate with a ULP driver of said host computer is disclosed in Boom, paragraph 47 (the NIC is in communication with the host computer).

Regarding claim 10, said TCP handler is adapted to communicate with the network is disclosed in Boom, paragraph 36 (disclosing handling TCP processing on network packets).

Regarding claim 11, said link handler is adapted to communicate with a link driver of said host computer is disclosed in Boom, paragraphs 33 and 36 (the device driver for the NIC would handle link functions between the host and the NIC).

Regarding claim 12, said link handler is adapted to communicate with a network is disclosed in Boom, paragraph 36 (the link functions are performed on data received from the network).

Regarding claim 14, said network interface card is capable of receiving commands from an enhanced stack belonging to said host, said enhanced stack being further capable of supporting session layer acceleration is disclosed in Boom,

paragraphs 47-49 (disclosing a stack that communicates session data with the NIC to enable offloaded processing).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boom in further view of Bailey.

Regarding claim 9, said TCP handler is adapted to communicate with a transport accelerator driver of said host computer is missing from Boom. However, Bailey discloses in paragraph 185 a network accelerator that communicates with a NIC. It would have been obvious to one skilled in the art at the time of the invention to include the accelerator of Bailey in the system of Craft. The motivation would be to speed up the connections.

Regarding claim 13, said network interface card further comprises at least one of a transport accelerator, embedded accelerator, portable stack, embedded link driver and embedded applications is missing from Boom. However, Bailey discloses in paragraph 185 a network accelerator that is coupled to a NIC. It would have been obvious to one skilled in the art at the time of the invention to include the accelerator of Bailey in the NIC of Craft. The motivation would be to speed up the connections.

9. Claims 15, 17-19, and 22 are rejected under 35 U.S.C. 103(a) as being Boom in further view of Grun.

Regarding claim 15, accelerating the operation of the NIC/stack interactions is disclosed in Boom, paragraph 49 (disclosing the NIC performing offloaded processing to speed up the exchange of data between the stack and the NIC). The commands between said enhanced stack and said network interface card are performed using primitives is missing from Boom. However, Grun discloses in column 3, lines 21-25, defining a set of command primitives for communications between an I/O device (such as a stack) and a channel adapter (such as a NIC). It would have been obvious to one skilled in the art to use primitives to communicate between the stack and NIC of Boom. The motivation would be to be able to define whatever command primitives are needed in the system. See also Newton's Telecom Dictionary, defining a primitive as an abstract, implementation independent interaction between a layer service user and provider; a primitive may be defined and used to implement any kind of interaction between the two entities.

Regarding claim 17, at least one of said acceleration primitives is used to establish a direct connection between ULP of said host and said ULP handler is disclosed in Boom, paragraphs 47-49 (the NIC driver communicates with the protocol stack, which performs session; the ULPs are connected, so there must be some interaction there, which involves primitive, see rejection of claim 15).

Regarding claim 18, said direct connection enables at least one function associated with a TCP/IP layer to be processed on said network interface card is disclosed in Boom, paragraph 36.

Regarding claim 19, said direct connection comprises enables transferring data to said network interface card from said host and transferring data from said network interface card to said host is disclosed in Boom, paragraph 49.

Regarding claim 22, said acceleration primitives are enabled by the use of an application programming interface (API) for interfacing between said host and said network interface card, said API being further comprised of a plurality of acceleration primitives is missing from Boom. However, Grun discloses in column 3, lines 21-25, defining a set of command primitives (an API) for communications between an I/O device (such as a stack) and a channel adapter (such as a NIC). It would have been obvious to one skilled in the art to use an API of primitives to communicate between the stack and NIC of Boom. The motivation would be to be able to define whatever command primitives are needed in the system. See also Newton's Telecom Dictionary, defining a primitive as an abstract, implementation independent interaction between a layer service user and provider.

10. Claims 55-60 and 134 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craft (6427171) in view of Boom.

Regarding claims 55 and 134, the network interface card is a layer 5 network interface card in a network implementing an open systems interconnection (OSI) protocol is missing from Craft. However, Boom does disclose paragraphs 48-49 the session layer (layer 5 in the OSI standard) being implemented on the NIC. It would have been obvious to one skilled in the art at the time of the invention to have the NIC perform layer 5 processing. The motivation would be to be able to offload the

processing (see Boom, paragraph 49, describing the NIC directly forwarding data based on the session information, making the processing more efficient).

Regarding claim 56, data from the network is received and processed by the network interface card is missing from Craft. This is disclosed in Boom, paragraph 49 (disclosing processing the packets; any data anywhere in the packet is data from the network). It would have been obvious to one skilled in the art at the time of the invention to have the NIC process data from the network. The motivation would be to be able to offload the processing (see Boom, paragraph 49, describing the NIC directly forwarding data based on the session information, making the processing more efficient).

Regarding claim 57, said processing comprises taking over and performing at least one function of a physical layer from the host computer is disclosed in Craft, column 2, lines 42-45 (the INIC provides a physical interface with the network).

Regarding claim 58, said processing comprises taking over and performing at least one function of a data link layer from the host computer is missing from Craft. This is disclosed in Boom, paragraph 36. It would have been obvious to one skilled in the art at the time of the invention to have the NIC perform a data link layer function. The motivation would be to be able to offload the processing (see Boom, paragraph 49, describing the NIC directly forwarding data based on the session information, making the processing more efficient).

Regarding claim 59, said processing comprises taking over and performing at least one function of a network layer from the host computer is missing from Craft. This

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is disclosed in Boom, paragraph 36. It would have been obvious to one skilled in the art at the time of the invention to have the NIC perform a network layer function. The motivation would be to be able to offload the processing (see Boom, paragraph 49, describing the NIC directly forwarding data based on the session information, making the processing more efficient).

Regarding claim 60, said processing comprises taking over and performing at least one function of a transport layer from the host computer is missing from Craft. This is disclosed in Boom, paragraph 36 (TCP/IP is a transport layer function). It would have been obvious to one skilled in the art at the time of the invention to have the NIC perform a transport layer function. The motivation would be to be able to offload the processing (see Boom, paragraph 49, describing the NIC directly forwarding data based on the session information, making the processing more efficient).

11. Claims 94-104, 107-114, and 117-125 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craft ((6687758) in view of Boom and Grun.

Regarding claim 94, Interfacing between a host and a network interface card is disclosed in Craft, column 3, lines 2-3 (disclosing INICS connected to a host). Accelerating operation of the host and NIC is disclosed in Craft, column 1, line 66- column 2, line 3 (disclosing accelerating operations of the host by offloading processing to the NIC). The network interface card is a layer 5 network interface card in a network implementing an open systems interconnection (OSI) protocol is missing from Craft. This is disclosed in Boom paragraphs 48-40 (disclosing the NIC performing session layer processing). It would have been obvious to one skilled in the art at the time of the

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invention to offload session layer processing to the NIC. The motivation would be to reduce the amount of host processing power that must be spent on protocol processing (see Craft, column 1, lines 59-63). An application programming interface (API), said API comprising of a plurality of acceleration primitives is missing from Boom. However, Grun discloses in column 3, lines 21-25, defining a set of command primitives (an API) for communications between an I/O device (such as a stack) and a channel adapter (such as a NIC). It would have been obvious to one skilled in the art at the time of the invention to use an API of primitives to communicate between the stack and NIC of Boom. The motivation would be to be able to define whatever command primitives are needed in the system. See also Newton's Telecom Dictionary, defining a primitive as an abstract, implementation independent interaction between a layer service user and provider.

Regarding claim 95, at least one of said acceleration primitives is a connection transfer in acceleration primitive sent in order to transfer a connection for acceleration by the network interface card is disclosed in Craft, column 3, lines 15-19 (disclosing transferring connections to the INIC for fast-path processing).

Regarding claim 96, said connection transfer in acceleration primitive further contains at least information required to start a new or continued processing of an existing connection is disclosed in Craft, column 3, lines 15-19 (disclosing transferring connections to the INIC for fast-path processing, such required information would be included in the transaction).

Regarding claim 97, said necessary information comprises at least one of a connection 4tuple, initial sequence number, unacknowledged sequence number, acknowledgement sequence number, current sent time stamp, current received timestamp and remote or local negotiated window scale values is disclosed in Craft, column 4, lines 1-2 (disclosing the connection information including timers and receive and transmit windows for sliding window protocols).

Regarding claim 98, said connection transfer in acceleration primitive includes a unique identifier for connection reference, said unique identifier being further recognizable by said network interface card and by said host is disclosed in Craft, column 3, line 59-column 4, line 9 (disclosing creating the CCB for each connection and storing it in both the ATCP stack and the INIC).

Regarding claim 99, at least one of said acceleration primitives is a connection transfer out acceleration primitive capable of causing said network interface card to transfer a connection out of said network interface card is disclosed in Craft, column 3, lines 43-46 (disclosing transferring connections from the INIC to the host for slow-path processing).

Regarding claim 100, said connection transfer out acceleration primitive provides only a connection reference to said network interface card is not specifically disclosed in Craft. However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would have been obvious to one skilled in the art at the time of the invention to provide only the connection reference when transferring the connection. The motivation would be to fully describe the connection in order to transfer it.

Regarding claim 101, at least one of said acceleration primitives is a connection disconnect acceleration primitive, said acceleration primitive being capable of causing said network interface card to gradually close a previously opened connection to said network interface card is disclosed in column 7, lines 34-39 (disclosing the INIC sending a disconnection indication).

Regarding claim 102, said connection disconnect acceleration primitive provides only a connection reference to said network interface card is not specifically disclosed in Craft. However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would have been obvious to one skilled in the art at the time of the invention to provide only the connection reference when disconnecting the connection. The motivation would be to fully describe the connection in order to disconnect it.

Regarding claim 103, at least one of said acceleration primitives is a connection abort acceleration primitive, said acceleration primitive being capable of causing said network interface card to abort a previously opened connection to said network interface card is disclosed in column 8, lines 47-49 or Craft (disclosing aborting connections).

Regarding claim 104, said connection abort acceleration primitive provides only a connection reference to said network interface card is not specifically disclosed in Craft. However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would have been obvious to one skilled in the art at the time of the invention to provide only the connection reference when aborting the connection. The motivation would be to fully describe the connection in order to abort it.

Regarding claim 107, at least one of said acceleration primitives is a connection send acceleration primitive, said acceleration primitive being capable of causing a transmission of data over an established connection is disclosed in Craft, column 6, lines 58-61 (disclosing sending out data on a connection via a port on the INIC).

Regarding claim 108, said connection send acceleration primitive is associated with data related to a TCP/IP connection, said data is at least one of connection reference, list of buffers in the host memory and their length, said buffers containing data to be transferred over a connection is disclosed in Craft, column 6, lines 61-67 (disclosing a connection handle for the send request).

Regarding claim 109, at least one of said acceleration primitives is a connection receive acceleration primitive, said acceleration primitive being capable of causing a reception of data over an established connection, the data being received by connection specific receive buffers in a host memory is disclosed in column 4, lines 10-21 (disclosing a file write that is associated with a CCB, which would include data to be written, being received).

Regarding claim 110, said connection receive acceleration primitive is associated with data related to a TCP/IP connection, said data is at least one of connection reference, list of connection specific buffers in the host memory and their length is disclosed in column 4, lines 10-12 (the CCB is the connection reference).

Regarding claim 111, at least one of said acceleration primitives is a connection synchronization acceleration primitive, said acceleration primitive being capable of flushing existing acceleration pipes between the host and said network interface card is

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disclosed in Craft, column 5, lines 5-9 (disclosing synching the connections) and column 8, lines 46-47 (disclosing flushing connections).

Regarding claim 112, said connection synchronization acceleration primitive further includes a connection reference is not specifically disclosed in Craft. However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would have been obvious to one skilled in the art at the time of the invention to include the connection reference when synching the connection. The motivation would be to fully describe the connection in order to synchronize it.

Regarding claim 113, a connection synchronization reply acceleration primitive is sent in response to said connection synchronization acceleration primitive is missing from Craft. However, Grun discloses in column 16, lines 50-55, generating confirmation primitives in reply to other primitives. It would have been obvious to one skilled in the art at the time of the invention to use the reply accelerations of Grun in the system of Craft. The motivation would be to signal that the synchronization process started by the synchronization primitives is completed.

Regarding claim 114, said connection synchronization reply acceleration primitive further includes a connection reference is not specifically disclosed in Craft. However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would have been obvious to one skilled in the art at the time of the invention to include the connection reference when replying to the synch acceleration for the connection. The motivation would be to fully describe the synchronized connection so that the system knows what connection the reply is in reference to.

Regarding claim 117, at least one of said acceleration primitives is a connection receive notify acceleration primitive, said acceleration primitive being capable of notifying of the reception of additional data by said network interface card over a connection is disclosed in Craft, column 3, lines 43-46.

Regarding claim 118, said additional data may be directed to one of an anonymous host buffer and a connection specific host buffer is disclosed in Craft, column 3, lines 43-46 (the data may go to a destination in storage on the host, which is an anonymous source buffer).

Regarding claim 119, at least one of said acceleration primitives is a asynchronous buffer acceleration primitive, said acceleration primitive being capable of posting said anonymous receive buffers to said network interface card is disclosed in Craft, column 4, lines 22-23 (disclosing sending buffer addresses to the INIC).

Regarding claim 120, said anonymous receive buffers are used for a received TCP data and a layer 2 data is disclosed in Craft, column 2, lines 53-55.

Regarding claim 121, data associated with said asynchronous buffer acceleration primitive includes a list of buffers in host memory and buffer lengths is disclosed in Craft, column 4, lines 22-23 (disclosing sending addresses of buffers with available space, which would indicate length, to the INIC).

Regarding claim 122, data associated with said connection receive notify acceleration primitive includes connection reference, buffer identification and amount of data posted into the buffer is not specifically disclosed in Craft. However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would

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have been obvious to one skilled in the art at the time of the invention to include the connection reference when notifying a receipt of data. The motivation would be to fully describe the connection to which the received data pertains.

Regarding claim 123, said network interface card is capable of providing a notification from said network interface card to the host with an indication of a change in connection state is disclosed in column 7, lines 34-36 (link failure is a change of state).

Regarding claim 124, the data associated with said notification includes connection reference, notification type and a connection state is disclosed in column 7, lines 33-45 (disclosing notifying the host that a specific connection is in link failure, and a disconnect status indication).

Regarding claim 125, said notification type includes connection established, connection disconnected, connection timed-out and connection gracefully closed is disclosed in column 7, line 37 (disconnect) and column 8, lines 45-49 (timeout)

12. Claims 105-106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craft (6687758) in view of Grun in further view of Craft II (6697868).

Regarding claim 105, at least one of said acceleration primitives is a connection shutdown of transmission acceleration primitive, said acceleration primitive being capable of causing said network interface card to gracefully close a write side of a connection of said NIC is missing from Craft. However, Craft does disclose write connections in column 4, line 10, file write connections. Further, Craft II (6697868) discloses in column 8, lines 48-51, a close connection command. It would have been obvious to one skilled in the art at the time of the invention to include a close connection

command in the system of Craft. The motivation would be to close a connection when it is no longer needed.

Regarding claim 106, said connection shutdown of transmission acceleration primitive provides only a connection reference to said network interface card is not specifically disclosed in Craft. However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would have been obvious to one skilled in the art at the time of the invention to provide only the connection reference when shutting down the connection. The motivation would be to fully describe the connection in order to shut it down.

13. Claims 115-116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craft (6687758) in view of Grun in further view of Anand.

Regarding claim 115, said network interface card is capable of sending a connection send notify acceleration primitive, wherein said connection send notify acceleration primitive notifies of a successful transfer of an amount of data related to an offloaded TCP connection is missing from Craft. However, Anand discloses in column 8, lines 33-34, notification upon completion of a data transfer. It would have been obvious to one skilled in the art at the time of the invention to include a send notify primitive in the system of Craft. The motivation would be to indicate that a transfer was completed.

Regarding claim 116, data associated with said connection send notify acceleration primitive includes at least one of a connection reference and amount of data successfully transferred over the connection is not specifically disclosed in Craft.

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However, Craft discloses in column 3, line 60, a CCB, which acts as a connection reference. It would have been obvious to one skilled in the art at the time of the invention to include the connection reference when notifying that a transfer has completed. The motivation would be to fully describe the completed transfer.

14. Claims 126-133 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craft (6687758) in view of Grun and Boom in further view of Wang.

Regarding claim 126, a set parameters acceleration primitive is capable of updating at least a global TCP/IP parameter of an TCP/IP stack of said NIC is missing from Craft. However, Wang discloses in paragraph 63 modifying TCP parameters. It would have been obvious to one skilled in the art at the time of the invention to use the TCP/IP modification procedure of Wang in the system of Craft. The motivation would be to have the TCP/IP parameters reflect changing conditions in the network.

Regarding claim 127, associated data with said set parameters acceleration primitive includes at least a list of parameters to be changed is missing from Craft. However, Wang discloses in paragraph 63 modifying TCP parameters using accelerations including the parameters. It would have been obvious to one skilled in the art at the time of the invention to use the TCP/IP modification procedure of Wang in the system of Craft. The motivation would be to have the TCP/IP parameters reflect changing conditions in the network.

Regarding claim 128, a get parameters acceleration primitive is sent to said L5NIC for the purpose of retrieving at least a global non-connection specific TCP/IP parameter from a TCP/IP stack of said NIC is missing from Craft. However, Wang

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discloses in paragraph 63 exchanging accelerations containing non-connection specific parameters, such as timeout values. It would have been obvious to one skilled in the art at the time of the invention to use the TCP/IP information retrieval procedure of Wang in the system of Craft. The motivation would be to have various parts of the system know the TCP parameters, which describe the state of the network.

Regarding claim 129, associated data with said get parameters acceleration primitive includes at least a list of parameters to be retrieved is missing from Craft. However, Wang discloses in paragraph 63 exchanging accelerations containing the TCP parameters. It would have been obvious to one skilled in the art at the time of the invention to identify the parameters retrieved in Wang in the system of Craft. The motivation would be to know which parameters to retrieve.

Regarding claim 130, in response to said get parameters acceleration primitive a get parameters reply acceleration primitive is sent by said NIC is missing from Craft. However, Wang discloses in paragraph 63 exchanging accelerations containing the TCP parameters. It would have been obvious to one skilled in the art at the time of the invention to reply to a request for parameters as is done in Wang in the system of Craft. The motivation would be to send the requested parameters.

Regarding claim 131, associated data with said get parameters acceleration primitive includes at least a list of reported values is missing from Craft. However, Wang discloses in paragraph 63 exchanging accelerations containing the TCP parameters. It would have been obvious to one skilled in the art at the time of the

invention to list the parameters retrieved in Wang in the system of Craft. The motivation would be to know which parameters have been sent.

Regarding claim 132, a get statistics acceleration primitive is sent to said L5NIC for the purpose of gathering statistics from a TCP/IP stack of said NIC on at least a link layer and TCP/IP is missing from Craft. However, Wang discloses in paragraph 62 communicating and storing TCP connection statistics. It would have been obvious to one skilled in the art at the time of the invention to communicate TCP connection statistics among the NICs and overall TCP control as is done in Wang in the system of Craft. The motivation would be to keep up with changing conditions in the network.

Regarding claim 133, a get statistics reply acceleration primitive is sent in response to said get statistics acceleration primitive, and further providing a set of reported statistical values is missing from Craft. However, Wang discloses in paragraph 62 communicating and storing TCP connection statistics. It would have been obvious to one skilled in the art at the time of the invention to send TCP connection statistics among the NICs and overall TCP control in response to a request for such statistics as is done in Wang in the system of Craft. The motivation would be to keep up with changing conditions in the network.

Allowable Subject Matter

15. Claims 61-93 and 135 are allowed.
16. Claims 16, 20, 21, and 23-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2616

Conclusion

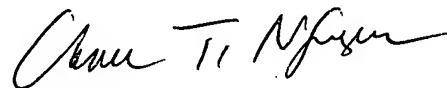
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD
4/28/2006

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4/28/06



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